



# DevOps Culture Tools

Duration 2 day(s) (DEVOPS-DEV-01)

Set up maintainable dev and production environments

## Description

The will to adopt the DevOps approach is more and more frequent in the companies, putting the focus on the collaboration between the various actors of the software chain, from the developer to the operator, while passing the validation of the quality and the infrastructure drivers. If building a DevOps approach goes beyond using tools or communicating that your teams are in DevOps mode, some practices (and associated tools) become unavoidable.

## Goals

- Understand the challenges of the industrialization of application deployments
- To know how to smooth the interactions between the different project teams
- Establish more reliable environments by integrating production constraints from application development to deployment

### *Public*

- Technical Architect - Solution Architect - Developer - Operator

### *Prerequisites*

- Experience in software development

### *Structure*

30% Theory, 70% Practice

## Program

### Definition and reminder of the challenges of the DevOps approach

### Software factory and deployment industrialization

- The role of automation
- Continuous Integration
- Continuous Delivery and Deployment

### Virtualization and Containers

- Strategies and issues
- From the developer's job to the production
- Provisioning of VM and Illustration with Ansible
- The Container approach and the implementation with Docker

### Application data management

- Presentation of the problems (Versioning, Duplication, etc.)
- Implementation with Liquibase and Flyway

### Application Lifecycle Management

- Strategies and issues
- Implementation with Spring Cloud Config
- Implementation with confd

### Centralization of metrics

- Strategies and issues
- Implementation with Prometheus and Grafana
- Implementation with the TICK Stack (Telegraph, InfluxDB, Chronograf, Kapacitor)

### Centralization of the logs

- Strategies and issues

- Implementation with Elastic Stack
- Implementation with Graylog

### Generating Alerts

- Strategies and issues
- Implementation with Prometheus Alerter
- Implementation with Kapacitor

### Service Discovery

- Strategies and issues
- Implementation with Consul
- Discovery service and container orchestration

### Load Balancing application

- Strategies and issues
- Implementation with HaProxy
- Implementation with Traefik